

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1-76. (Canceled)

77. (Previously Presented) A method of maskless lithographic pattern generation using an array of exposure cells wherein the exposure cells expose separate areas of a surface to be exposed.

78. (Previously Presented) The method of claim 77, wherein a substantial portion of the separate areas are exposed simultaneously.

79. (Previously Presented) The method of claim 77, further comprising moving through a sequence of horizontal and vertical motions at least one of the array of exposure cells and the surface to be exposed.

80. (Currently Amended) The method of claim 77, further comprising aligning by electro-magnetic coupling the array of exposure cells and the surface to be exposed.

81. (Previously Presented) The method of claim 77, wherein each exposure cell is selected from the group consisting of a radiation source cell or a shuttered cell.

82. (Previously Presented) The method of claim 77, wherein the shutter of a shuttered cell is used to vary operation of the exposure cell.

83. (Previously Presented) The method of claim 77, wherein radiation from a radiation source cell is selected from the group consisting of electrons, protons, X-ray, UV or optical.

84. (Previously Presented) A method of maskless lithographic pattern generation, the method comprising:

providing an array of exposure cells on a substrate, wherein the exposure cells expose separate areas of a surface to be exposed; and

providing a stress-controlled dielectric layer on the substrate.

85. (Previously Presented) The method of claim 84, wherein a substantial portion of the separate areas are exposed simultaneously.

86. (Previously Presented) The method of claim 84, further comprising moving through a sequence of horizontal and vertical motions at least one of the array of exposure cells and the surface to be exposed.

87. (Currently Amended) The method of claim 84, further comprising aligning by electro-magnetic coupling the array of exposure cells and the surface to be exposed.

88. (Previously Presented) The method of claim 84, wherein each exposure cell is selected from the group consisting of a radiation source cell or a shuttered cell.

89. (Previously Presented) The method of claim 84, wherein the shutter of a shuttered cell is used to vary operation of the exposure cell.

90. (Previously Presented) The method of claim 84, wherein radiation from a radiation source cell is selected from the group consisting of electrons, protons, X-ray, UV or optical.

91. (Previously Presented) The method of claim 84, wherein the stress of the stress-controlled dielectric layer is less than about 8×10^8 dynes/cm².

92. (New) The method of claim 77, wherein the array of exposure cells includes at least one million cells.

93. (New) The method of claim 77, further comprising providing at least one stress-controlled dielectric layer.

94. (New) The method of claim 93, wherein the stress of the at least one stress-controlled dielectric layer is less than about 8×10^8 dynes/cm².

95. (New) The method of claim 94, wherein the stress is tensile.

96. (New) The method of claim 93, wherein the stress of the at least one stress-controlled dielectric layer is 2 to 100 times less than the fracture strength of the at least one stress-controlled dielectric layer.

97. (New) The method of claim 96, wherein the stress is tensile.

98. (New) The method of claim 93, wherein the at least one stress-controlled dielectric layer is selected from the group consisting of silicon dioxide and silicon nitride.

99. (New) The method of claim 93, wherein the at least one stress-controlled dielectric layer is elastic.

100. (New) The method of claim 93, wherein the at least one stress-controlled dielectric layer is substantially flexible.

101. (New) The method of claim 93, wherein the at least one stress-controlled dielectric layer is capable of forming at least one of a flexible membrane and a free standing membrane.

102. (New) The method of claim 93, further comprising providing a plurality of interconnect conductors formed within the at least one stress-controlled dielectric layer.

103. (New) The method of claim 93, wherein the at least one stress-controlled dielectric layer is formed by multiple RF energy sources.

104. (New) The method of claim 93, wherein the at least one stress-controlled dielectric layer is formed at a temperature of about 400°C.

105. (New) The method of claim 77, further comprising providing at least one thinned flexible substrate that has integrated circuits formed thereon.

106. (New) The method of claim 84, wherein the array of exposure cells includes at least one million cells.

107. (New) The method of claim 84, further comprising providing at least one stress-controlled dielectric layer.

108. (New) The method of claim 91, wherein the stress is tensile.

109. (New) The method of claim 84, wherein the stress of the at least one stress-controlled dielectric layer is 2 to 100 times less than the fracture strength of the at least one stress-controlled dielectric layer.

110. (New) The method of claim 109, wherein the stress is tensile.

111. (New) The method of claim 107, wherein the at least one stress-controlled dielectric layer is selected from the group consisting of silicon dioxide and silicon nitride.

112. (New) The method of claim 107, wherein the at least one stress-controlled dielectric layer is elastic.

113. (New) The method of claim 107, wherein the at least one stress-controlled dielectric layer is substantially flexible.

114. (New) The method of claim 107, wherein the at least one stress-controlled dielectric layer is capable of forming at least one of a flexible membrane and a free standing membrane.

115. (New) The method of claim 107, further comprising providing a plurality of interconnect conductors formed within the at least one stress-controlled dielectric layer.

116. (New) The method of claim 107, wherein the at least one stress-controlled dielectric layer is formed by multiple RF energy sources.

117. (New) The method of claim 107, wherein the at least one stress-controlled dielectric layer is formed at a temperature of about 400°C.

118. (New) The method of claim 84, further comprising providing at least one thinned flexible substrate that have integrated circuits formed thereon.